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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/438,955	11/12/1999	RICKARD MARKS VON WURTEMBERG	21513	1076

7590 12/17/2002
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EXAMINER

JACKSON, CORNELIUS H

ART UNIT PAPER NUMBER

2828

DATE MAILED: 12/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/438,955

Applicant(s)

VON WURTEMBERG ET AL.

Examiner

Cornelius H. Jackson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.



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Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Acknowledgment

1. Acknowledgment is made that applicant's Amendment, filed on 07 October 2002, has been entered. Upon entrance of the Amendment, claims 1-17 were cancelled and claims 18-29 were added. Claims 18-29 are now pending in this application.

Response to Amendment

2. The amendment filed 07 October 2002 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: a light output port.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 18, 21 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Kim (EPO 803943 A2). Kim discloses a surface emitting cavity laser **Fig. 3** comprising a laser stack **12** consisting essentially of a high reflectivity mirror **123**, a low reflectivity mirror **121**; and an active light-amplifying region **13** located between the high and low reflectivity mirrors **123/121**; a light output port (**the hole formed in layer 11**) located on one side of the stack adjacent the low reflectivity mirror for transmitting light emitted by the active light-amplifying region **13** and constituting an output of the laser; and an ohmic contact **30** on an opposite side of the stack **12** adjacent the high reflectivity mirror **123**, the ohmic contact **30** being photon transparent for transmitting some of the light emitted by the light amplifying region **13** that passes through the high reflectivity mirror **123** for monitoring with an external photodetector **15**, **see col. 1, lines 40-45, col. 2, lines 39-49 and col. 3, lines 4-52.**

In regards to claim 21, Kim discloses all stated limitations, **see column 3, lines 40-51 and Fig. 3.**

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In regards to claim 26, Kim discloses the laser **Fig. 3** is a top emitting vertical cavity surface emitting laser with a substrate **14** adjacent the high reflectivity mirror **123**, and the ohmic contact **30** is located on the substrate **14**.

In regards to claim 7, Lin et al. teaches all stated limitations, **see column 4, lines 64-65**.

In regard to claims 11-13 and 15-17, the method of forming a device is not germane to the issue of patentability of the device itself, since the device is obtained by the method of forming.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 19, 20, 22-25 and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (EP 0803943 A2) in view of Lin et al. (5838708). Kim, as applied to claims 18, 21 and 26, discloses the claimed invention except for the ohmic contact comprising a photon transparent material or indium tin oxide. Lin et al. teaches an ohmic contact made of a photon transparent material. It would have been obvious to one having ordinary skill in the art at the time the invention was made to the photon transparent material of Lin et al. or indium tin oxide in the invention of Kim, since it has

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been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice [In re Leshin, 125 USPQ 416] and Kim teaches the replacement of elements with alternatives serving the same, equivalent or similar purpose, **col. 4, lines 14-20**.

In regards to claim 20, see the corresponding rejection(s) above.

In regards to claim 22, Lin et al. teach the ohmic contact has a thickness between 1 and 100nm, **see col. 4, lines 64-65**.

In regards to claim 23, Lin et al. teach as a matter of design choice that the laser maybe a bottom emitting vertical cavity, **see col. 4, lines 32-53**. Also, by flipping the laser of Kim upside down, it would be considered as a bottom emitting vertical cavity laser with substrate **11**.

In regard to claims 24 and 25, see the corresponding rejection(s) above.

In regards to claim 27, Lin et al. teach the substrate **212** is transparent at the wavelength of the light, **see Fig. 2**.

In regard to claims 28 and 29, see the corresponding rejection(s) above.

Response to Arguments

7. Applicant's arguments with respect to claims 1-29 have been considered but are moot in view of the new ground(s) of rejection.

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Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kish, Jr. et al. (US 5724376 A) teach a surface emitting laser with a monitor **Figs.4 and 6A-B** consisting essentially of a plurality of spaced apart mirrors **53 and 55**, a light amplifying region between the mirrors **51**, a substrate **212**, and a photon transparent ohmic contact (**contact metallization/photodetector**) for passing light energy therethrough whereby light emission through said surface emitting laser may be monitored.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cornelius H. Jackson whose telephone number is (703) 306-5981. The examiner can normally be reached on 8:00 - 5:00, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-7722 for regular communications and (703)308-7721 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.


chj

December 16, 2002


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